

REMARKS

Applicants have the following comments in support of this amendment and in response to the Final Rejection.

Claim Amendments – Reference to Disclosure

The amended claims of the present application are directed to certain novel apparatus adapted for imaging tissue. Specific amendments to the independent claims are as follows:

Independent Claims 26, 33, 38 and 41 have been amended to incorporate beam expansion and focusing means adapted for controlling the fineness of a confocal region. Such means and use of such means are disclosed, for example, at pages 27-28 of the specification of the present application. Applicants have discovered that such specialized beam expansion and focusing means are highly advantageous when imaging tissue (such as in vivo diagnostic imaging) with a sufficiently fine confocal region that will achieve two-photon excitation (for example, as illustrated in Figures 2, 6, and 8-12 of the present application).

Accordingly, Applicants respectfully submit that the amendments to independent Claims 26, 33, 38 and 41 are not adding any new matter and are clearly supported by the application as filed. Therefore, it is requested that these amendments be entered and considered at this time.

Additionally, Claims 49 and 51 have been canceled without prejudice or disclaimer.

Claim Rejections – 35 USC §103

In the Final Rejection, the Examiner rejects Claims 26-30, 33-36, 38, 40-49 and 51 under 35 U.S.C. §103(a) as being unpatentable over Denk et al. (US 5,034,613) in view of Kolobanov et al. (US 4,973,848). This rejection is respectfully traversed for at least the following reasons.

While Applicants traverse this rejection, in order to advance this prosecution, as explained above, independent Claims 26, 33, 38 and 41 have been amended to incorporate the features of beam expansion and focusing means adapted for controlling the fineness of a confocal region. Such specialized beam processing means are advantageous when imaging tissue using two-photon excitation methods. Such means are not described, suggested (and are not needed) in Denk, which is principally directed to microscope systems rather than tissue imaging apparatus. The minute samples, such as cell cultures or tissue specimens on microscope slides, that are the subject of Denk do not require the beam processing methods and apparatus of the present invention, and hence Denk clearly has no motivation to consider their use. Similarly, Kolobanov, which does not concern methods or apparatus adapted for two-photon excitation, also does not describe nor suggest the beam processing methods and apparatus of the present and claimed invention.

Therefore, any combination (which Applicants do not admit is proper) of the teachings of Kolobanov, which is directed to a laser imaging method that is completely unrelated to the two-photon methods of Denk, and Denk would not lead one skilled in the art to conceive of Applicants' beam processing methods and apparatus, as neither are the subject of Kolobanov or Denk.

Accordingly, Applicants respectfully submit that the beam processing methods and apparatus of amended independent Claims 26, 33, 38 and 41 render these claims, and those claims dependent thereupon, novel and non-obvious over any combination of Denk and Kolobanov.

For at least the above-stated reasons, the presently claimed invention is patentable over Denk in view of Kolobanov, and it is respectfully requested that this rejection be withdrawn.

Conclusion

It is respectfully submitted that the claims of the present application are in an allowable condition and are patentable over the cited references. Accordingly, it is requested that the application now be allowed.

If any further fee should be due for this amendment or the RCE, please charge our deposit account 50/1039.

Favorable reconsideration is earnestly solicited.

Respectfully submitted,

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